

## Research Article

# Barriers and Facilitators to Healthy Lifestyle among Refugees Resettled in the United States

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### ABSTRACT

**Objective:** The purpose of this project was to provide health education for refugees and to gather perspectives on barriers, and facilitators toward healthy eating and regular physical activity.

**Methods:** Six health promotion classes were held between February and June, in 2017. Data were collected using a pre-class survey, focus groups, and field notes. Qualitative data were mapped to the constructs of the Health Belief Model. Twenty-eight participants from diverse refugee populations participated in this project, of which 12 participated in 4 focus groups.

**Results:** Desires to “*stay healthy*” and “*to be there for family*” appeared to be key facilitators for leading healthy lifestyle. Key barriers to achieving healthy lifestyle include

“*busy schedule*,” and “*not able to afford healthy food*.” Participants described their struggles to access affordable fresh food and believed having adopted the American diet caused adverse health outcomes. Throughout the project, participants showed interests in utilizing local parks but lacked information on access and use.

**Conclusion:** Future health promotion interventions should focus on familiarizing refugee families with local produce while being culturally sensitive on different cooking methods and diet preferences. More health classes and opportunities for free to low-cost exercise are needed.

**Keywords:** Health belief model; Health education; Healthy lifestyle; Refugees; Resettlement; USA

### Key points:

#### What is known about this topic?

- Obesity, overweight, diabetes and hypertension are common health issues within various refugee populations resettled in the United States (US).
- Diet habits among refugees are largely influenced by cultural factors.
- Physical inactivity is another health-related concern among refugees resettled in the US.

#### What this paper adds?

- The lack of affordable fresh food was a major barrier to healthy eating among refugees resettled in the US.
- Refugees resettled in the US believed the change of environment and diet after resettlement had led to the diagnoses of certain health conditions.
- Refugees resettled in the US identified health classes focusing on eating and exercises, as well as park access as community needs.

### Background

The United States (US) is one of the top hosting countries to offer hope and shelter for people fleeing from conflicts and persecutions [1,2]. Over 3 million refugees have resettled in the US since 1975 [2]. Prior to their resettlement in the US, many refugees spent extended periods of time in refugee camps. Commonly known conditions at camps include lack of access to clean water, lack of sufficient nutrition, poor housing conditions, and high incidents of infectious diseases [3-7]. Moreover, people who have lived in a refugee camp likely have unmet health needs and are more likely to report chronic illnesses [8,9].

Health concerns among refugees do not cease upon arrival to their host country. Several studies have investigated changes in health status among refugees after they have moved to the US. Such studies found that obesity, overweight, diabetes, and

hypertension to be common health issues within various refugee populations resettled in the US [10-13]. Since children often rely on their parents for food consumption, many refugee children may be also at high risk for overweight and obesity. One study found the prevalence of overweight and obesity among refugee children increased from 17.3% to 35.4%, from initial intake to year 3 post-resettlement, surpassing the prevalence rate for US-born children at the time of the study [14]. One contributing factor may be that diet habits are largely influenced by cultural factors [15]. Physical inactivity is another health-related concern among refugees. For instance, the lack of familiarity of how to adopt an active lifestyle in a new country is a common barrier to being more physically active [16]. Findings from prior research warrant a need for further research and health education to promote healthy lifestyle within refugee populations to prevent undesirable health outcomes such as hypertension and obesity

[12,14,17].

This project utilized the Health Belief Model (HBM) to explore barriers and facilitators to healthy lifestyle. The HBM posits people's beliefs toward barriers and benefits of a health promotion action, together with perceived susceptibility and severity of a health problem, and explains individuals' engagement with preventive health behaviors [18]. The HBM has been successfully used to tailor interventions and to understand beliefs toward health behaviors [19-21]. However, previous studies that examined barriers and facilitators to healthy lifestyle among refugees have focused mainly on specific ethnic groups, or were conducted outside of the US [22-24]. Studies which implemented healthy lifestyle programs with broader refugee populations in the US are lacking.

This paper describes a project that was designed for and implemented to refugees from diverse backgrounds. As opposed to limiting from a certain region, this project accepted participants from any country of origin to maximize practical significance for future health promotion development. The purpose of this project was two-fold. First, the project aimed to provide health education on healthy lifestyle for refugees, and then to gather the information about their perceptions on barriers and facilitators toward healthy eating and regular physical activity.

## Methods

### Setting

This project was carried out at a community college campus in Salt Lake City, Utah, USA, which is frequently used for workshops and other services for individuals with a refugee background. This project included the provision of healthy lifestyle classes, observations of the classes, focus groups and a brief survey. This study was approved by the University of Utah Institutional Review Board (IRB number 00091780).

### Participants and recruitment

Participants were individuals over 18 years of age who moved to the US with a refugee background. Research team members recruited participants at a community college where classes and focus group took place. Flyers were posted on campus to increase exposure of the class and focus group. The combination of flyers and word-of-mouth (i.e., from resettlement agency staff to potential participants) allowed for the project to include a diverse pool of participants. Consent was obtained from each participant.

### Data collection

This project utilized multiple sources of data including focus groups, survey, and field notes to ensure data validity and methodological triangulation. The richness of data from multiple sources enhanced the interpretive status of data and strengthened the study findings [25]. All data were collected between February and June 2017.

Throughout all stages of this project, research team members provided interpretive assistance for participants who

may have needed it. Together, team members were able to provide assistance for participants who spoke the following languages: Arabic, Burmese, French, Karen, Poe Karen, and Somali. Approximately half of all participants needed language assistance on filling out the surveys, as well as during classes and focus groups.

## Procedure

### Pre-class survey and class evaluation

Before each class, participants were asked to fill out the pre-class survey on demographics as well as eating and physical activity habits. Toward the end of the class, participants were asked to fill out a class evaluation survey to identify areas of improvement for future classes. Participants were then invited to stay in the same classroom for the focus group.

### Class and field notes

Each healthy lifestyle class lasted approximately 30 minutes. Class content included the discussions of the health benefits of different foods, as well as recommended portions for each food. A variety of physical activities and tips on adding more activities were discussed (e.g., taking the stairs instead of using an elevator). The majority of the class materials were pictures shown on a projector, followed by handouts with pictures for tips on balanced eating for participants to take home. Handouts included illustrations of different food groups and were intended to remind participants to consume more fruits and vegetables. Classes followed a discussion-based format to encourage engagement of the participants. Starting in the third class, resistance band exercises were incorporated as group activity during class.

Field notes were taken by one or two undergraduate/graduate students with a background in health education during classes and focus groups. Field notes focused on group dynamics (i.e., interactions between participants and instructor), questions and concerns expressed by participants, responses that were specific toward the constructs of the HBM, and the environment of the classroom (i.e., noise level). The notes were utilized to maximize the richness of data and offered multiple perspectives for data interpretation.

### Focus groups

Initially, six focus groups were scheduled. Due to the availability of participants, the project included six classes and four focus groups. Focus groups were designed as one-time only. In other words, each participant was allowed to participate in only one focus group. The focus groups were semi-structured and followed a focus group guide with 14 questions guided by the HBM. For example, "What good, and how, would eating healthier bring to you and your family?" Other questions included "What would stop you from adding more physical activity to your daily activities" and "What would stop you from eating healthier?" The focus group questions were developed by the facilitator and two key informants of the target population to ensure openness and appropriateness of questions to fit

diverse backgrounds. The key informants were also on-site as interpreters throughout the project. Each audio-recorded focus group lasted approximately 20-40 minutes.

### Incentives

Fresh fruits and healthy snacks were provided during a class and a focus group. At the end of the focus group, individual bags of dried beans and brown rice (approximately 1 pound per bag) were available for participants to take home. Additionally, each participant received a small gift valued at approximately \$1 (i.e., first aid kit, kitchen towel).

### Data Analysis

Survey data were initially entered into an Excel spreadsheet and analyzed using SPSS version 22. Audio-recorded files were transcribed. Field notes and focus group data were entered into Microsoft Word for open coding analysis.

Emergent themes were coded, categorized, and mapped to the constructs of the HBM using the constant comparative method [26]. During open coding, tentative labels were created as patterns emerged. Field notes were utilized to compare and cross-check with focus group data during open coding throughout data analysis. Findings are reported through a narrative inquiry using participants' own explanations of events and beliefs. Quotations and short phrases are presented to represent findings through participants' own descriptions of their experiences.

## Results

### Pre-class survey results

**Participant characteristics:** In total, 28 adults with a refugee background participated in this healthy lifestyle project. The average length of stay in the US was 6 years and 4 months (Table 1). The mean age was approximately 36 years of age and 43% of participants had received some college education or higher. Additionally, the majority (93%) had stayed at a refugee camp prior to their resettlement in the US. The average household included three adults and two children. Participants came from different parts of the world with various language(s) spoken at home. Nepali (36%), English (18%), Arabic (11%), and Somali (11%) were the most common languages spoken at home. Other languages included Dinka, French, Kinyarwanda, Sinhalese, and Swahili, which were spoken by participants from Rwanda, South Sudan and Sri Lanka. Some participants reported they spoke more than one language at home.

In general, participants reported their health status between "good" and "very good." The majority responded their health was "good" (n=13), followed by "excellent" (n=7), "very good" (n=5), "fair" (n=2), and "poor" (n=1). Most participants reported eating three meals a day (n=13) while some reported two meals per day (n=12). Additionally, most participants reported use of "vegetable oil/liquid margarine," "don't use MSG," and limited use of "salt" and "sugar" when preparing meals at home. Approximately 64% participants reported purchasing food of

**Table 1: Demographics of class attendees (N=28).**

Characteristics	Frequency	Percentage
<b>Gender</b>		
Females	8	29%
Males	20	71%
<b>Age</b>		
18-35	13	46%
36-55	10	36%
56+	4	14%
Unknown	1	4%
<b>Highest Education Completed</b>		
Less than High School	8	29%
High School	8	29%
Some College	7	25%
College Degree	2	7%
Graduate Degree/Professional Degree	3	11%
<b>Occupation*</b>		
Student	7	25%
Working Full Time	15	54%
Working Part Time	4	14%
Looking for Work/Unemployed	3	11%
Retired	3	11%
<b>Receive Government Assistance Program</b>		
Yes	14	50%
No	12	43%
Maybe/don't know	2	7%
<b>Stayed at Refugee Camp</b>		
Yes	26	93%
<b>Language Spoken at Home**</b>		
Arabic	3	11%
English	5	18%
Nepali	10	36%
Somali	3	11%
Other	7	25%
<b>Self-identified Ethnicity</b>		
Bhutanese	4	14%
Congolese	2	7%
Nepali	9	32%
Somali	4	14%
Sudanese	4	14%
Other	5	18%

\* Participants were asked to select all that applied

\*\* Participants were asked "What language do you speak at home?" Some spoke more than 1 language at home. Table presents data collected from 22 class participants, 6 participants did not respond

their country of origin (i.e., at a local ethnic food store). On average, participants exercised 4 days per week. The average score was 4 when asked "how important is it for you to follow a healthy-eating diet" on a scale of 1 to 5 (i.e., 1 being "not at all important" and 5 being "very important"). An average score of 4.6 was obtained when participants were asked "how important is it for you to exercise regularly each week" on the same scale of 1 to 5.

## Field note results

**Group dynamics and class environment:** Class size remained small. Participants sat in a circle during class and focus group. Almost every class began with some distractions and then got quiet which facilitated more focus toward the class. Examples of common distractions include chatter between participants and noise from other classrooms or the hallway even after the classroom door was closed. Participants who spoke English tended to be more engaged and shared more experiences than those who relied on an interpreter. Group dynamics seemed to be at most engaging (i.e., having most attention and engagement from participants) during (1) class activity, and (2) when a participant began sharing thoughts or experience which often prompted sharing from other participants.

**Questions and concerns from participants:** Participants asked questions across topics covered and not covered during class. Topics included different levels of sugar in various kinds of fruits, benefits of certain food groups, where to look for green space (i.e., parks and trails), and how find their ethnic food. Many participants expressed concerns about the lack of affordable healthy food in general (e.g., fresh food) and specific foods from home country (e.g., camel milk), which were also emphasized in focus groups. There were inquiries on locating affordable organic food. Participants also expressed interests in having more exercise opportunities.

## Focus group results

**Perceived susceptibility of not adopting a healthy lifestyle:** Among the 28 participants of this project, 12 participated in the focus groups. In general, participants believed they did not exercise enough, while many participants acknowledged the importance of regular physical activity. The majority of the participants gave simple and concise responses such as “yes [don't have enough exercises]” and “I feel like I'm not having enough activities.” Some participants elaborated that their beliefs were the reasons of physical inactivity. For example, one participant said “I don't have enough exercise. I feel like I don't have enough time for exercise, I work.” Another participant stated “yeah, I understand that the exercise is very good for your health and I can't, I couldn't do it, because [of recovery from] surgery...I am not able to do [exercise].”

**Perceived severity of not adopting a healthy lifestyle:** When asked how serious of an impact of insufficient regular exercise and unhealthy diet on health, a wide range of possible negative outcomes were discussed, including “die early,” “more likely to get a disease,” “family start worrying about you,” “not feeling good,” and “missing work.” For instance, one participant stated:

*There are different problems. There are a lot of problems when it comes to eating. If you don't eat healthy, you just keep doing the same thing and [gain weight] and not exercising and [become] lazy. I think fast food is the reason. (Male, Group 1)*

Other participants gave specific examples for adverse health outcomes, such as “diabetes,” and “high blood pressure.” One participant also responded “unable to provide

for the family” as a negative result from not keeping up with healthy eating and regular exercises. For example,

*If a person does not eat well nor exercise, that person will not be able to provide for the family. Not staying in shape and not eating healthy can make a person become lazy and they can easily get sick. This negatively affects the family's income because the adult would not have the energy to go to work. Financial issues arise [too]. (Female, Group 3)*

**Perceived benefits of healthy lifestyle:** The most commonly reoccurred themes for benefits of healthy lifestyle were “good health,” “health benefits,” and “disease prevention.” Health benefits included “clean your system,” “sweat more,” and “have more energy.” One participant also stated eating healthy and exercising regularly can increase help bring more awareness of one's for healthy food and physical activity.

*The good thing about keeping track of your health, eating a balance diet and exercising regularly is that you're more aware of your body's needs. If a person does not exercise nor pay attention to their diet, they tend to be lazy and eat junk food every day. They lose control of their appetite. That's why eating healthy and exercising is important because then you'll have energy and [you'll be] able to control what you can and cannot eat, you pay close attention to what your body needs. (Female, Group 3)*

Several participants also reported “sweating” and “blood circulation” as health benefits from having regular exercise. “Feel better” or “feel good” were other commonly referred benefits from physical activity. For example, one participant said “if I don't exercise, I have pain in my knee, joint...if I do exercise, I feel better.” Another participant noted:

*Eating healthy and exercising...prevent the individual from getting any [disease]...such as diabetes and blood pressure. Exercising is also good for the person's mental health. Especially since we're elders, we need to pay extra attention to what we eat, eat food with more vitamins and such. It is very important for everyone to eat healthy and stay active. (Female, Group 3)*

**Perceived barriers to adopt a healthy lifestyle:** “Financial reasons” emerged as a major barrier to healthy diet. For instance, one person stated “not being able to afford it, money is something that can prevent you from physical activity.” Some participants also stated “healthy food cost more,” “[being] busy,” and “fast food is cheaper” as barriers to healthy eating habits.

Lack of free time was revealed as a key subtheme relating to insufficient enough regular exercise. “Time,” “work” and “take care of kids” were common responses when asked about what prevented participants from exercising. One participant replied “my husband has two jobs” as the main reason for less time to go for walks together. Another participant described spending time doing exercises as a “waste of time” in lieu of doing other things. This participant further explained: “I think time is very important...the schedule of job, professional job and ... [house chores]. You could waste two days a week [by spending time doing exercises].” Another participant also said: “come [work]

*in morning...and we finish [work at] 5 o'clock... house clean, go shopping, do laundry... all of those problems, [take a] long time [to finish]."*

Several participants also mentioned "being sick," "being injured," and "procrastination" as barriers to having regular exercises. In general, participants described procrastination as "laziness." Described by one participant, "Procrastinating or you know lazy... keep saying...gonna [exercise] later but later never come."

**Cues for actions and self-efficacy:** There was a general consensus in "staying healthy" as a key motivator to eat healthy and exercise regularly. Specifically, when asked "what would help you stay motivated to have a healthier diet," participants repeatedly referred to their desires to "to stay healthy" and "motivation for exercise." One individual stated, "If we eat healthy... we're better... [have] more energy, more strength... eating healthy helps to [motivate] to exercise more."

Some individuals also referred their desires to "feel better," "prevent diseases," and "wanting to live long for family" as reminders to eat healthier. Participants also shared a belief that having more financial security would promote a healthier diet. For example, one participant said "When I have money, I can eat good food, because I have money." Another participant also said "Maybe every time I have money, I can eat good food."

When asked to identify ways to keep them motivated to have a healthy lifestyle," participants generally responded with "stay healthy." One participant suggested the use of a calendar as a reminder to what he would eat. This individual said, "For example, if you have a calendar, like set up a schedule for everyday, like Monday, you eat [certain food]... [eat different food for]Tuesday...[eat different food on] Thursday...have it in front of you on the refrigerator, that makes me not forget what to eat."

Overall, participants provided positive outlooks when asked "how likely are you to take action and lead a healthy life?" One participant responded with "very common" and other responses were "common" or "I try." For instance, one participant implied she tried to be physically active despite the difficulty to exercise after long work hours: "After eight hours of work... get home very exhausted...I have an indoor bike, I try to exercise at least an hour when I can [using the indoor bike]."

Another participant shared his positive experience about how to maintain a healthy lifestyle everyday:

*For me exercising everyday is, can be [led with a healthy lifestyle]. You can take a schedule...it means that we take time to exercise...maybe 20 or 30 minutes [each day]...take time for other activities, share with family members...I think we have four dimensions to be fit with body. Social dimension, intelligent dimension, physical dimension, and belief dimension... to combine ...the four dimensions, we [can] be better everyday. (Male 3, Group 1)*

**Cultural differences in eating habits and exercises:** Throughout the focus groups, participants repeatedly mentioned their struggles in finding affordable "fresh" ingredients and their

frustration regarding a "lack of fresh foods." Participants further distinguished between the two with the former being "it costs more" to buy healthy foods and the latter being "you can't buy" because certain foods were simply not available near where they lived. Many individuals longed for specific food such as "African vegetables," while others missed having "fresh milk," "camel milk," and "fresh fruits" and "meat from home." For example, one participant stated, "The things they eat over there [South Sudan and Kenya], like the dishes they make, you can't find it here. You can't buy...certain types of meat that you can't just grab or find at [local grocery stores]." Another participant also shared her frustration with a change in diet:

*In my country, we used to drink fresh milk. Straight from the cow or the camel. But you can't find that right here, so all the food we eat here has GMOs. I don't want to eat it but I have no choice...we could've bought fresh, organic food [but] it's expensive [here]. (Female, Group 3)*

Some participants also believed that the adoption of an American diet might have been associated with certain health conditions such as "diabetes," "loss of teeth," and problems relating to "blood pressure" and "cholesterol." For instance, one person stated:

*In my opinion, the food I have been eating in my country and the food I eat here are very different. The foods we have been eating in my country were organic [and] fresh. When I was in my country, I didn't have diabetes, high blood pressure, [and] cholesterol [problems]. But now that I'm in [US], [doctors] telling me I have diabetes. I think the reason why I'm diagnosed with diabetes has to do with the food here not being organic and fresh. (Female, Group 3)*

Many participants shared their opinions on "every food is sweet" in the US. The thought of American food being "too sweet" was widely acknowledged and considered as a problem. One participant shared "here [US] food is very sweet." Another participant summarized her opinion about American food and food from home as the following: "...here...every food is sweet...for example...you try American chicken, it is totally different [referring to freshness and taste]....African chicken is very delicious and very healthy... I just don't eat chicken from here [US], because I feel like I can get sick."

Another cultural difference identified by the participants was the "change of environment." One participant stated "I think the physical exercise[s] are the same, but we have a problem of change of environment...for example, in my country we have more mountain[s] you can walk by foot." This participant's experience was echoed by other participants. For instance, one participant elaborated further: "You [could] go to the forest ... you can go by foot on the road in Africa." Participants' explanation on the "change of environment" may suggest a decreased amount of physical activity after having moved to the US, which could be a result of change in their built environment and the mode of transportation.

When asked if participants had experienced discrimination in the US, the majority responded "no," except two male participants. Those two male participants described having felt

excluded from society since moving to the US. One person said *“For African people, the discrimination can't come with an activity but with sociality”* while the other person stated *“If you don't c[o]me from [places where] people that are already playing in the park, they don't let you go and play with them and join them.”*

**Needs expressed by participants:** In general, participants expressed interests in attending healthy lifestyle classes in the future. For example, one participant said *“I really appreciate this class... we really needed...health class for exercise and it's something that's really needed.”* In addition to health classes, participants also indicated the lack of knowledge about park access and trails. For instance, one participant said *“...about the access to the park..is it free? Or must [we] pay?...we have no information about the access.”*

### Class evaluation survey results

Overall, participants gave positive feedback about the health class. For instance, 10 out of 12 participants reported *“very high”* or *“high”* for their level of interest in the topics discussed in class while two people said it was *“average.”* Half of the participants thought class length was *“just right”* whereas four people thought class time was either *“too little”* or *“far too little.”* All participants thought the content of the class were *“excellent”* or *“good”* and rated *“excellent”* or *“good”* for the instructor's preparedness of the class. When asked *“do you plan on using what you learned from today's class,”* 11 out of 12 participants reported *“yes.”* The majority (n=9) also reported that they were confident to do something that they learned from class. However, one person reported *“no”* while another person responded with *“maybe/don't know.”*

### Discussion

This healthy lifestyle project provided health education on healthy eating and regular exercises, and gathered perspectives and health beliefs about a healthy lifestyle from the participants with a refugee background. Overall, participants knew the benefits of a healthy lifestyle and were aware of a wide range of possible adverse effects if one did not eat healthy and exercise regularly. Nonetheless, most participants acknowledged they could do better with their current eating and exercise habits. This study has three main findings. First, the lack of affordable fresh food was a major barrier to healthy eating. Second, participants believed the change of environment and diet after resettlement was related to chronic health conditions. Finally, participants identified health classes focusing on healthy eating and exercises, as well as park access, as community needs.

One recurring theme throughout different classes was high price or nonavailability of fresh foods in the community. This finding suggests that participants may have lived in a food desert. Food deserts affect any resident of the areas, though low income residents, especially those with limited transportation options, face even more obstacles in accessing affordable fresh food. The challenge in accessing affordable healthy food portrays the experiences of food insecurity. Prior research has identified this particular challenge among resettled refugees

in the US [27,28]. For instance, one study found that food insecurity was experienced by approximately 3 in 4 participants among refugees resettled in the US [28].

The change of diet and environment after resettlement have also made direct impacts on the lifestyle of refugees. In this study, participants reflected they had more opportunities to walk before living in the US. Physical activity such as walking was often a part of daily living prior to resettlement in developed countries. The conception of exercise and body movement may be different between their countries of origin and in the US. One study with Somali refugees revealed that physical activity was incorporated into their daily lives and that the concept of walking for health did not exist in Somalia [29]. This study also concluded that the concept of physical activity as leisure was unfamiliar to people from Somalia. Regarding diet change, one study with refugees from Cambodia found that those who had experienced severe deprivation were more likely to consume a high-fat diet and to be overweight or obese during post-resettlement [30]. While our study did not explore the presence of food insecurity prior to resettlement in the US, participants generally believed that adopting the American food culture had led them to eat not as healthy as they did before coming to the US. The process of acculturation to American culture and behaviors is also a possible risk factor to develop chronic diseases for refugees, though this possible risk factor may be offset by utilizing available proper resources in the host country that were inadequate in their country of origin [31,32].

While the availability of food and food culture certainly affects one's decision-making about diet, it is also possible that there is a lack of information on identifying locally grown food (i.e., in-season food at stores) that is both healthy and easily accessible. Focus group data suggest a general consensus that American food is unhealthy and unappealing because they were unfamiliar with healthy American food ingredients. This finding is similar to those of another study with refugees and service providers that indicated the lack of knowledge of food in the US contributed to poor food choices among recently arrived refugees [33]. In a different study, over half (58%) of the participants with a refugee background expressed uncertainty toward whether they were eating the *“right food”* in the US [34]. Diverse habits of cooking meat and vegetables may be one area to focus on in future health classes. Although participants repeatedly pointed out their difficulty in accessing fresh ingredients for cooking, the preferred method of how they actually prepare meals was not thoroughly explored. Health promotion programs for refugees should build upon existing positive health practices. Furthermore, cultural factors such as cultural beliefs about healthy eating should be further explored and incorporated into future health promotion classes.

Overall, health classes and class activity (i.e., elastic resistance bands) received positive feedback from the participants. Participants acknowledged the importance of health education and urged for healthier lifestyle classes for their communities. Future health promotion classes should continue to be offered at a location where refugees are already familiar with; this is relevant as offering culturally sensitive

classes and workshops at a familiar site is an effective method to disseminate health-related information for refugees [33]. Moreover, more educational interventions on nutrition and physical activity are necessary for refugees and immigrants in the US [35,36]. However, little is known about specific health promotion needs among diverse refugee populations who experience various environmental and geographical factors depending on resettlement locations in the US. For instance, refugees resettled in a smaller city may have different health promotion needs from their counterparts living in a metropolitan city. More research is needed to identify specific barriers and enablers to healthy lifestyle experienced by different ethnic groups or geographic regions.

### Limitations

This project has several limitations. While the focus groups gathered important perspectives, the sample size was small. Some individuals were unable to participate in this study due to language barriers. Since the majority of the participants were from Africa, the data of this study could be skewed toward perceptions of refugees from the African region. Although nearly all participants reported they would use what they learned in class, this project did not include follow-up to determine the impact of a class on actual health behavioral changes.

### Implications

The results of this project bring valuable insights for the further development of health education classes for refugees. Future health classes with refugee populations should focus on providing health education regarding how to eat healthy using locally available food while acknowledging culturally appropriate eating habits. Moreover, their own cultural methods of cooking should be considered in future health education curriculum. Classes incorporating more tips and demonstrations of various forms of physical activity for different physical conditions are potentially helpful for people with different needs. More available resources for free or low-cost physical activity are also needed in their community. Additionally, cultural and religious values must be carefully considered for future health promotion classes. A culturally “safe” place may be useful for promoting exercise classes for refugees to accommodate different cultural values [37]. For instance, an all-women group exercise class in a room with coverings for windows would allow women to freely participate in a group class without worry of men walking by or looking into the class from outside of the classroom. Most importantly, future education interventions must consider that an individual’s lifestyle choices are shaped by more than culture, but the intertwining of varying factors including personal beliefs, cultural values, and environmental factors [15,33]. More research is necessary for developing tailored interventions to improve the overall wellness of refugees, as well as follow-ups to examine effectiveness of such interventions.

### Conclusion

This study provides insights about beliefs toward healthy eating and regular exercises among refugees resettled in the

US. While the benefits of a healthy lifestyle were widely acknowledged, some less-healthy eating habits and a sedentary lifestyle remained. Financial reasons and the lack of available time were main inhibitors for people to engage in healthy eating habits and physical activity. Increasing the availability of affordable healthy foods and opportunities for physical activities in refugee communities are essential for developing an environment that encourages residents to have a healthy lifestyle.

### Ethical Approval

The University of Utah Institutional Review Board (IRB) approved this study.

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